

Grade 4

Adopted 2022

Physical Science DOMAIN

Energy

1. Use evidence to construct an explanation relating the speed of an object to the energy of that object. [S.4.1](#)
2. Make observations to provide evidence that energy can be transferred from place to place by sound, light, heat, and electric currents. [S.4.2](#)
3. Ask questions and predict outcomes about the changes in energy that occur when objects collide. [S.4.3](#)
4. Apply scientific ideas to design, test, and refine a device that converts energy from one form to another. [S.4.4](#)

Waves: Waves and Information

5. Develop a model of waves to describe patterns in terms of amplitude and wavelength and that waves can cause objects to move. [S.4.5](#)
6. Generate and compare multiple solutions that use patterns to transfer information. [S.4.6](#)

Life Science DOMAIN

Structure, Function, and Information Processing

7. Develop a model to describe that light reflecting from objects and entering the eye allows objects to be seen. [S.4.7](#)
8. Construct an argument that plants and animals have internal and external structures that function to support survival, growth, behavior, and reproduction. [S.4.8](#)
9. Use a model to describe that animals receive different types of information through their senses, process the information in their brain, and respond to the information in different ways. [S.4.9](#)

Earth and Space Science DOMAIN

Earth's Systems: Processes that Shape the Earth

10. Identify evidence from patterns in rock formations and fossils in rock layers to support an explanation for changes in a landscape over time. [S.4.10](#)
11. Analyze and interpret data from fossils to provide evidence of the organisms and the environments in which they lived long ago. [S.4.11](#)
12. Make observations and/or measurements to provide evidence of the effects of weathering or the rate of erosion by water, ice, wind, or vegetation. [S.4.12](#)

13. Analyze and interpret data from maps to describe patterns of Earth's geological features. **S.4.13**
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**Engineering,
Technology, and
Applications of
Science** **DOMAIN**

Engineering Design

14. Define a simple design problem reflecting a need or a want that includes specified criteria for success and constraints on materials, time, or cost. **EDS.4.14**
15. Generate and compare multiple possible solutions to a problem based on how well each is likely to meet the criteria and constraints of the problem. **EDS.4.15**
16. Plan and carry out fair tests in which variables are controlled and failure points are considered to identify aspects of a model or prototype that can be improved. **EDS.4.16**